



UNITED STATES DEPARTMENT OF COMMERCE
Patent and Trademark Office

Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
-----------------	-------------	----------------------	---------------------

09/124,649 07/29/98 NGAI

ALT-155

TM02/0119

JEFFREY H INGERMAN
FISH & NEAVE
1251 AVENUE OF THE AMERICAS
NEW YORK NY 10020-1104

EXAMINER

BATAILLE, P

ART UNIT

PAPER NUMBER

2186

DATE MAILED:

01/19/01

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.

09/124,649

Applicant(s)

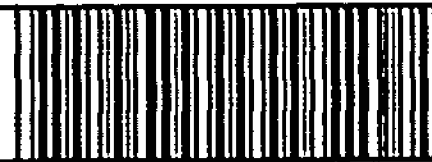
Ngai et al.

Examiner

P. Bataille

Group Art Unit

2186



☒ Responsive to communication(s) filed on Oct 26, 2000

☒ This action is **FINAL**.

☐ Since this application is in condition for allowance except for formal matters, **prosecution as to the merits is closed** in accordance with the practice under *Ex parte Quayle*, 35 C.D. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire 3 month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

Disposition of Claim

☒ Claim(s) 1-12 is/are pending in the applicat

Of the above, claim(s) _____ is/are withdrawn from consideration

☐ Claim(s) _____ is/are allowed.

☒ Claim(s) 1-12 is/are rejected.

☐ Claim(s) _____ is/are objected to.

☐ Claims _____ are subject to restriction or election requirement.

Application Papers

☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.

☐ The drawing(s) filed on _____ is/are objected to by the Examiner.

☒ The proposed drawing correction, filed on Oct 26, 2000 is ☒ approved ☐ disapproved.

☐ The specification is objected to by the Examiner.

☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

☐ All ☐ Some* ☒ None of the CERTIFIED copies of the priority documents have been

☐ received.

☐ received in Application No. (Series Code/Serial Number) _____.

☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

*Certified copies not received: _____

☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

☒ Notice of References Cited, PTO-892

☒ Information Disclosure Statement(s), PTO-1449, Paper No(s). 9

☐ Interview Summary, PTO-413

☐ Notice of Draftsperson's Patent Drawing Review, PTO-948

☐ Notice of Informal Patent Application, PTO-152

— SEE OFFICE ACTION ON THE FOLLOWING PAGES —

Art Unit: 2186

DETAILED ACTION

Oath/Declaration

1. The oath or declaration is defective. A new oath or declaration in compliance with 37 CFR 1.67(a) identifying this application by application number and filing date is required. See MPEP §§ 602.01 and 602.02.

The oath or declaration is defective because:

It does not identify the citizenship of each inventor.

It does not identify the city and state or foreign country of residence of each inventor.

Applicant's representative signed remarks with correction noting the deficiencies. However, a substitute declaration, signed by all inventors and stating all inventor's country of citizenship, is required (see MPEP 602.03). Objection to the declaration is maintained.

Applicant is reminded that a new oath or declaration is required because the Oath or Declaration or the wording of an oath or declaration cannot be amended. If the wording is not correct or if all of the required affirmations have not been made or if it has not been properly subscribed to, a new oath or declaration is required. The new oath or declaration must properly identify the application of which it is to form a part, preferably by application number and filing date in the body of the oath or declaration. See MPEP §§ 602.01 and 602.02.

Art Unit: 2186

Claim Objections

The claim objection is maintained because applicant has failed to show how the dependent claims have further limited the independent claims. Rule 37 CFR 1.75(c) clearly states that a dependent claim must further limit an independent claim. No such case has been proven in applicant claimed invention, i.e. dependent claims 3-6 must further limit the programmable logic device recited in claim 1. Claims 3-6 and 9-12, however, recite different embodiments of the claimed invention.

2. Claim 3-6 and 9-12 are objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form.

It seems that it is applicant's intention to recite claims 3-4 and 9-10 in independent form. The preamble only recited the purpose of the process and did not limit the body of the claim. It seems that the claimed preamble provides a different purpose of the invention. Applicant is reminded of the general order of a claim (see 37 CFR 1.75). The preamble only recited the purpose of the process and did not limit the body of the claim, any independent claim should contain in the following order, (1) a preamble comprising a general description of all the elements or steps of the claimed combination which are conventional or known, (2) a phrase such as "wherein the

Art Unit: 2186

improvement comprises," and (3) those elements, steps and/or relationships which constitute that portion of the claimed combination which the applicant considers as the new or improved portion.

37 CFR 1.75(c) clearly states "one or more claims may be presented in dependent form, referring back to and further limiting another claim or claims in the same application. Any dependent claim which refers to more than one other claim (multiple dependent claim) shall refer to such other claims in the alternative only."

Response to Arguments

3. Applicant's arguments filed October 26, 2000, with respects to claims 1-12, have been fully considered but they are not persuasive.

The previous Office Action the features recited in the claims as being anticipated by Heile (US6,020,759). Applicant contends that Heile does not anticipate the claimed invention because the reference does not show all elements of the claims. Applicant further notes that the examiner equates or identifies the claimed programmable interconnection resources with or as the decoders and multiplexers 13, 18, 19, 103, and 107 and said decoders and multiplexers do not have all the function required by the claims.

The claims, however, simply recite "a plurality of interconnection resources" for connecting interconnection conductors to logic resources". Applicant does a very good explaining a plurality of functions performed by the programmable interconnection resources, as illustrated in remarks on pages 5 and 6. The plurality of functions are not recited or well defined, as in

Art Unit: 2186

applicant's remarks, as in the claims. The language of the claimed programmable interconnection resources simply provides interconnection to the rest of the system.

Heile discloses known type of programmable logic device using many relatively small look-up tables whose inputs are either the inputs of the programmable logic device or the outputs of other look-up tables in the device and type of programmable logic device developed in which relatively large, user-configurable blocks of random access memory (RAM) are provided among blocks of look-up-table-type programmable logic [Col. 1, Lines 30-57].

Heile's system provides a programmable logic array device with configurable random access memory (RAM), i.e. a programmable logic device having RAM blocks embedded among logic blocks, each logic block being a configurable logic block (CLB) which includes one or two small look-up tables and being surrounded by interconnection conductors for conveying signals to, from, and between the configuration logic blocks (CLBs) and other circuitry on or off the device [Fig. 6, Col. 6, Lines 13-26], wherein each individual row of the configurable memory is separately addressable through data conductors for writing data to the memory or for reading data from the configurable memory, field effect transistor connecting memory elements to data output lines selected for reading if selected by logic [Col. 3, Lines 11-14, Lines 39-65].

The above has shown that Heile anticipated the claims. Therefore, the rejection as applied in previous Office Action is maintained and repeated below.

Art Unit: 2186

Claim Rejections - 35 U.S.C. § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

5. Claims 1-12 are rejected under 35 U.S.C. 102(e) as being anticipated by Heile (US6,020,759).

As per claims 1-2 and 7-8, Heile teaches a programmable logic array device [Fig. 2] comprising:

a plurality of logic resources [logic blocks 21, Fig. 2];

a plurality of group of interconnection conductors for interconnecting said logic resources [interconnection conductor network 23, Fig. 2]; and

a plurality of programmable interconnection resources for connecting conductors in said group of said interconnection conductors and to said plurality of logic resources [13, 18, 19, 103 & 107, Fig. 1], said programmable interconnection resources being less than fully populated [Col. 5, Lines 18-31, Lines 42-51]; said programmable logic array device includes

at least one random access memory device [10, Fig. 1 & 2] (Col. 3, Lines 7-10) having a read port [dataout conductor 110, Fig.1] and a write port [datain bus conductors 12, Fig. 1] (Col. 3, Lines 11-14);

Art Unit: 2186

a first programmable interconnection resource [103, Fig. 1] in said plurality of interconnection resources for connecting port conductors in said read port to a selected one of said plurality of group of interconnection conductors [Col. 3, Lines 39-55]; and

a second programmable interconnection resource [13, Fig. 1] in said plurality of interconnection resources for connecting port conductors in said write port to a selected one of said plurality of group of interconnection conductors [Col. 3, Lines 15-31]; wherein

said first and second programmable interconnection resources are populated to allow connection of an individual conductor in said selected one of said plurality of groups of interconnection conductors to corresponding port conductors in said read port and said write port [Fig. 4 & 5; Col. 3, Line 50 to Col. 4, Line 12].

As per claims 3-6 and 9-12, Heile teaches the programmable logic device shown in a data processing system [502, Fig. 7] including components such as a processor 504, memory board 506 and I/O circuitry 508 and other peripheral devices [Col. 6, Lines 30-33], and the said components mounted on a printed circuit board 530 [Col. 6, Lines 33-37].

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Art Unit: 2186

US Patent No.	6,011,730	Sample et al.	Jan. 4, 2000
US Patent No.	6,005,796	Sywyk et al.	Dec. 21, 1999
US Patent No.	5,744,980	McGowan et al.	Apr. 28, 1998

7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Contact Information

8. **Any response to this action should be mailed to:**

Commissioner of Patents and Trademarks

Washington, D.C. 20231

or faxed to:

Art Unit: 2186

(703) 308-9051 (for formal communications intended for entry)

Or:

(703) 305-9731 (for informal or draft communications,

please label "PROPOSED" or "DRAFT");

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA., Sixth Floor (Receptionist).


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Pierre-Michel Bataille whose telephone number is (703) 301-0134. The examiner can normally be reached on Tuesday to Friday from 7:30 A.M. to 6:00 P.M..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matthew M. Kim, can be reached on (703) 305-3821. The fax phone number for this Group is (703) 305-9731.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 305-3900.

P. Bataille

January 11, 2001


MATTHEW KIM
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100